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ABSTRACT

Results of a survey test in arithmetic, administered to all 5,118, year 3 pupils of Vancouver schools during the week of May 29-June 2, 1972, are summarized and compared with those of 1969. The two parts of the test--Number Work and Problems--were given in separate sessions. Three tables present the test results data. The data show that the subtest scores in 1972 were generally lower than those of 1969 at all percentile levels, but most noticeably near the lower limits. As in 1969, pupils had a slightly higher percentage on "Problems" than on "Number Work." (For a copy of the test, see TM 002 477.) (DB)

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RESEARCH REPORT

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477

Survey of Achievement in Arithmetic in Year Three of Vancouver Schools, May 29 - June 2, 1972

June 22, 1972.

E. N. Ellis

Research Report 72-10

Department of Planning and Evaluation
Board of School Trustees
1595 West 10th Avenue
Vancouver 9, B. C.

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SURVEY OF ACHIEVEMENT IN ARITHMETIC IN YEAR THREE OF VANCOUVER SCHOOLS, MAY 29 - JUNE 2, 1972

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SURVEY OF ACHIEVEMENT IN ARITHMETIC IN YEAR THREE OF VANCOUVER SCHOOLS, MAY 29 - JUNE 2, 1972

Summary

This report includes:

1. a summary of results on the Survey Test in Arithmetic (Form 69),
2. a comparison of results with those of 1969,
3. tables of local norms, and
4. a discussion of the findings.

In general, the pupils at the Year 3 level performed somewhat less well than did the pupils of 1969.

Introduction

A survey test in Arithmetic was administered to all Year 3 pupils (N=5,118) of Vancouver schools during the week of May 29 - June 2, 1972.

The two parts of the test were given in separate sessions:

Part 1, "Number Work", 48 items, 48 marks. (Time - 30 minutes)
Part 2, "Problems", 6 items, 12 marks. (Time - 20 minutes)

The test was designed by a committee of primary consultants, teachers and principals. The same form of the test was given to pupils of Year 3 during the week of May 26 - 30, 1969. A copy of the test is included with this report.

Summary of Results

The principal findings of the survey appear in Table I.

TABLE I: SUMMARY OF RESULTS, SURVEY TEST IN ARITHMETIC (FORM 69) YEAR THREE, VANCOUVER SCHOOLS, MAY 29 - JUNE 2, 1972.
(Results for 1969 are in brackets.)

	"Number Work"	"Problems"	"Total"
No. of Schools	72 (67)	72 (67)	72 (67)
No. of Pupils	5,040 (5,794)	5,118 (5,783)	5,099 (5,784)
Possible Score	48	12	60
Median Score	37.0 (38.6)	9.6 (10.0)	45.4 (47.9)
Median as %age	77.0% (80.4)	79.8% (83.3)	75.7% (79.8)
No. of "Perfect" Scores	157 (201)	1,671 (2,222)	131 (165)
No. of "Zero" Scores	1 (0)	291 (186)	1 (0)

A Comparison of the Results with those of 1969

For both subtests and for total score the medians in 1972 were somewhat lower than the median scores of 1969. Furthermore, there were fewer "perfect" scores and more "zero" scores.

The subtest scores in 1972 were generally lower than those of 1969 at all percentile levels but most noticeably near the lower limits.

Local Norms

Percentile norms appear in Table II and the ranges of scores corresponding to letter grades in Table III.

TABLE II: SCORES ON THE SURVEY TEST IN ARITHMETIC (FORM 69) - YEAR THREE, CORRESPONDING TO SELECTED PERCENTILE LEVELS, YEAR THREE, VANCOUVER SCHOOLS, MAY 29 - JUNE 2, 1972.

Percentile	Part 1 "Number Work" (N = 5,040)	Part 2 "Problems" (N = 5,118)	TOTAL SCORES (N = 5,099)
	(possible 48)	(possible 12)	(possible 60)
99	48.0	12.0	60.0
95	47.4	12.0	59.1
90	46.3	12.0	57.7
85	45.1	12.0	56.3
80	44.1	11.9	54.9
75	43.0	11.7	53.5
70	42.0	11.6	52.1
65	40.9	10.4	50.6
60	39.7	10.1	48.9
55	38.3	9.8	47.2
50	37.0	9.6	45.4
45	35.4	8.2	43.3
40	33.7	7.8	41.2
35	31.9	6.4	38.8
30	29.9	6.0	36.2
25	27.7	5.5	33.3
20	25.3	4.1	30.2
15	22.3	3.5	26.5
10	18.6	2.0	22.1
05	13.6	0.9	16.1
01	6.5	0.2	7.5

TABLE III: RANGES OF SCORES CORRESPONDING TO LETTER GRADES, SURVEY TEST IN ARITHMETIC (FORM 69) - YEAR THREE, VANCOUVER SCHOOLS, MAY 29 - JUNE 2, 1972

Letter Grade	Ranges of Scores		
	Part 1	Part 2	TOTAL SCORES
A	48	12	60
B	44-47	-	54-59
C+	40-43	11	49-53
C	34-39	8-10	42-48
C-	28-33	6- 7	34-41
D	14-27	1- 5	17-33
E	0-13	0	0-16

Discussion

The performance, in 1972, of Year 3 pupils on the Vancouver Survey Test in Arithmetic (Form 69) is comparable to that of Year 3 pupils in 1969. The sub-test scores for 1972 are slightly below those of 1969 at all percentile levels, particularly toward the lower ends of the distributions.

As in 1969, pupils had a slightly higher percentage on "Problems" than on "Number Work"

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THE BOARD OF SCHOOL TRUSTEES OF SCHOOL DISTRICT NO. 39 (VANCOUVER)
DEPARTMENT OF RESEARCH AND SPECIAL SERVICES

SURVEY TEST
in
ARITHMETIC
(Form 69)

GRADE 3

Pupil's Name _____
(First Name) (Last Name)

School _____ Date _____

Division Number _____

Score:
Part 1 _____
Part 2 _____
TOTAL _____

Do not turn the page until told to do so.

PART 1 - NUMBER WORK -- 30 minutes

Put in the answers:

1. $16 + 5 =$ ☐
2. $3 + 8 + 9 + 2 =$ ☐
3. $8 - 3 + 4 =$ ☐
4. ☐ $+ 9 = 17$
5. $16 + 17 =$ ☐
6. $14 - 6 =$ ☐
7. $43 - 9 =$ ☐
8. $100 - 36 =$ ☐
9. $9 - (3 \times 2) =$ ☐
10. $3 \times 3 \times 4 =$ ☐
11. ☐ $- 5 = 8$
12. $24 \div 8 =$ ☐
13. $(16 \div 4) \times 12 =$ ☐
14. $(8 \times 5) = (2 \times 5) + ($ ☐ $\times 5)$
15. $(\frac{1}{3} \times 21) + (\frac{1}{4} \times 24) =$ ☐
16. $2 \times$ △ $+$ ☐ $= 5$

Now give the answers to these:

17. $\begin{array}{r} 42 \\ +\ 59 \\ \hline \end{array}$

18. $\begin{array}{r} \$1.09 \\ +\ 2.14 \\ \hline \$\ . \end{array}$

19. $\begin{array}{r} 72 \\ -55 \\ \hline \end{array}$

20. $\begin{array}{r} 856 \\ -\ 97 \\ \hline \end{array}$

21. $\begin{array}{r} 18 \\ \times\ 3 \\ \hline \end{array}$

22. $\begin{array}{r} 24 \\ \times\ 5 \\ \hline \end{array}$

23. $11\overline{)\ 67}$

24. $4\overline{)\ 30}$

25. $21\overline{)\ 84}$

26. Add
$\begin{array}{r} 26 \\ 88 \\ 9 \\ \hline \end{array}$

27. Add
$\begin{array}{r} 38 \\ 402 \\ 57 \\ \hline \end{array}$

GO ON TO THE NEXT PAGE.

PART 1 - NUMBER WORK

Write the number on each line:

28. Eighteen _____

29. One hundred ninety-four _____

30. Three hundred five _____

31. Thirteen tens equal _____ ones.

32. 1573 = 1000 + _____ + 70 + 3.

33. Write in words, 52. _____.

Fill in the blanks:

34. 2 dimes 3 nickels = _____ cents.

35. 1 quarter = _____ nickels.

36. 3 years = _____ months.

37. 6 pints = _____ quarts.

38. 60 eggs = _____ dozen eggs.

39. 4 weeks = _____ days.

40. 26 inches = _____ feet _____ inches.

Put in the answer:

41. The number that is three more than 400 is ☐

42. The number that is one less than 900 is ☐

43. The number that is twenty-three more than 500 is ☐

44. The next two numbers would be 9, 12, 15, _____, _____.

Put in the correct sign:

45. 11 ☐ 8 = 19

46. 36 ☐ 6 = 6

47. 4 ☐ 0 = 4

48. In the box, cross out the one that does not belong with the others.

100 + 30
1 x 30
120 + 10
30 + (10 x 10)

GO BACK AND CHECK YOUR WORK!

Score: _____

PART 2 - PROBLEMS -- 20 minutes

Name _____

Write a number sentence for each problem. Do not work out the answer.
An example is done for you.

Example: Bill sold 8 tickets to the school concert and Betty sold 7.
How many did they sell altogether?

Number Sentence: $8 + 7 = \square$ OR $\square = 8 + 7$

49. Gordon had some marbles. Robert gave him 6 more. Now he has 15.
How many marbles did Gordon have at first?

Number Sentence:

50. Miss Rose has 30 children in her class. When they go to the library
6 children sit at each table. How many tables do they use in the library?

Number Sentence:

51. Nancy brought 12 Dutch stamps to school for a display. Jill brought 4 more than Nancy. How many stamps did Jill bring?

Number Sentence:

52. On Sports Day, 4 teams of girls ran in a relay race. There were 8 girls on each team. In all, how many girls ran in the race?

Number Sentence:

53. The milkman brought 80 cartons of milk to our school. There were 54 cartons of plain milk and the others were chocolate. How many cartons of chocolate milk did the milkman bring?

Number Sentence:

54. At recess, 14 boys were playing ball. Some more boys came to play. Then 20 boys were playing ball. How many boys came to play ball?

Number Sentence:

Score: _____

GO BACK AND CHECK YOUR WORK